CLAIMS

[1] An unstretched multilayer resin film composed of two or more resins, wherein at least one of them consists of a film containing a coloring component.

[2] A multilayer resin film as set forth in claim 1, wherein the surface of the multilayer resin film has an unevenness of 5.0 μm or less.

[3] A multilayer resin film as set forth in claim 1 or 2, wherein the resin of the layer containing the coloring component has a melt tension Tm at its extrusion temperature in the range of $0.5\ g \leq Tm < 1.0\ g$ and a thickness equal to a half or more of the total thickness.

[4] A multilayer resin film as set forth in claim 1 or 2, wherein the resin of the layer containing the coloring component has a melt tension Tm at its extrusion temperature in the range of $Tm \geq 1.0\ g$ and a thickness equal to one-third or more of the total thickness.

[5] A multilayer resin film as set forth in claim 1 or 2, wherein the resin of any layer not containing the coloring component has a melt tension of 1 g or more at its extrusion temperature and a thickness equal to one-third or more of the total thickness.

[6] A resin-coated metal sheet made by laminating on a metal sheet a multilayer resin film as set forth in any of claims 1 to 5.

[7] A method of manufacturing a multilayer resin film characterized by forming two or more kinds of resins including at least one kind of resin containing a coloring component into a multilayer film by employing a multi-manifold die and laminating the molten resins, while controlling the temperatures of extruders installed contiguously to the manifolds, respectively, the manifolds and the die portions adjoining the manifolds, respectively, so that the temperatures of the extruder through which a resin of high melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold may be held at a higher level than the temperatures of the extruder through which a resin of low melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold, so that the adjoining resin layers may have a difference in melt viscosity of 3,000 poises or less at a shear rate of 20 to 500 s^{-1}, and so that the resin containing a coloring component may have a melt tension Tm in the range of 0.5 g $\leq$ Tm < 1.0 g and a thickness equal to a half or more of the total thickness.

[8] A method of manufacturing a multilayer resin film characterized by forming two or more kinds of resins including at least one kind of resin containing a coloring component into a multilayer film by employing a multi-manifold die and laminating the molten resins, while controlling the

temperatures of extruders installed contiguously to the manifolds, respectively, the manifolds and the die portions adjoining the manifolds, respectively, so that the temperatures of the extruder through which a resin of high melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold may be held at a higher level than the temperatures of the extruder through which a resin of low melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold, so that the adjoining resin layers may have a difference in melt viscosity of 3,000 poises or less at a shear rate of 20 to 500 s^{-1}, and so that the resin containing a coloring component may have a melt tension Tm in the range of $Tm \geq 1.0$ g and a thickness equal to one-third or more of the total thickness.

[9] A method of manufacturing a multilayer resin film characterized by forming two or more kinds of resins including at least one kind of resin containing a coloring component into a multilayer film by employing a multi-manifold die and laminating the molten resins, while controlling the temperatures of extruders installed contiguously to the manifolds, respectively, the manifolds and the die portions adjoining the manifolds, respectively, so that the temperatures of the extruder through which a resin of high melt viscosity will pass, the corresponding manifold and the

corresponding die portion adjoining that manifold may be held at a higher level than the temperatures of the extruder through which a resin of low melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold, so that the adjoining resin layers may have a difference in melt viscosity of 3,000 poises or less at a shear rate of 20 to 500 s^{-1}, and so that the resin not containing any coloring component and having a melt tension of 1 g or more may have a thickness equal to one-third or more of the total thickness.

[10] A method of manufacturing a resin-coated metal sheet characterized by forming two or more kinds of resins including at least one kind of resin containing a coloring component into a multilayer film by employing a multi-manifold die and laminating the molten resins, while controlling the temperatures of extruders installed contiguously to the manifolds, respectively, the manifolds and the die portions adjoining the manifolds, respectively, so that the temperatures of the extruder through which a resin of high melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold may be held at a higher level than the temperatures of the extruder through which a resin of low melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold, so that the adjoining resin layers may have a

difference in melt viscosity of 3,000 poises or less at a shear rate of 20 to 500 s^{-1}, and so that the resin containing a coloring component may have a melt tension Tm in the range of 0.5 g $\leq$ Tm < 1.0 g and a thickness equal to a half or more of the total thickness, and by extruding it onto a metal sheet.

[11] A method of manufacturing a resin-coated metal sheet characterized by forming two or more kinds of resins including at least one kind of resin containing a coloring component into a multilayer film by employing a multi-manifold die and laminating the molten resins, while controlling the temperatures of extruders installed contiguously to the manifolds, respectively, the manifolds and the die portions adjoining the manifolds, respectively, so that the temperatures of the extruder through which a resin of high melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold may be held at a higher level than the temperatures of the extruder through which a resin of low melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold, so that the adjoining resin layers may have a difference in melt viscosity of 3,000 poises or less at a shear rate of 20 to 500 s^{-1}, and so that the resin containing a coloring component may have a melt tension Tm in the range of Tm $\geq$ 1.0 g and a thickness equal to one-third or more of the total thickness, and by extruding it onto a metal sheet.

[12] A method of manufacturing a resin-coated metal sheet characterized by forming two or more kinds of resins including at least one kind of resin containing a coloring component into a multilayer film by employing a multi-manifold die and laminating the molten resins, while controlling the temperatures of extruders installed contiguously to the manifolds, respectively, the manifolds and the die portions adjoining the manifolds, respectively, so that the temperatures of the extruder through which a resin of high melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold may be held at a higher level than the temperatures of the extruder through which a resin of low melt viscosity will pass, the corresponding manifold and the corresponding die portion adjoining that manifold, so that the adjoining resin layers may have a difference in melt viscosity of 3,000 poises or less at a shear rate of 20 to 500 s^{-1}, and so that the resin not containing any coloring component and having a melt tension of 1 g or more may have a thickness equal to one-third or more of the total thickness, and by extruding it onto a metal sheet.